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IS 8712-4 (1977): Guidelines for co-ordination of dimensions shipbuilding, Part 4 Controlling dimensions [TED 17: Shipbuilding]



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Bhartrhari—Nitiśatakam

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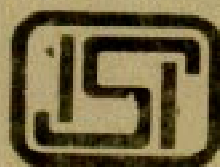
IS : 8712 (Part IV) - 1977

Indian Standard

GUIDELINES FOR CO-ORDINATION OF DIMENSIONS IN SHIPBUILDING

PART IV CONTROLLING DIMENSIONS

UDC 629.12 : 389.63



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs. 5.00 **Gr 2**

May 1978

Indian Standard

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PART IV CONTROLLING DIMENSIONS

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Indian Standard

GUIDELINES FOR
CO-ORDINATION OF DIMENSIONS
IN SHIPBUILDING

PART IV CONTROLLING DIMENSIONS

0. FOREWORD

0.1 This Indian Standard (Part IV) was adopted by the Indian Standards Institution on 30 December 1977, after the draft finalized by the Shipbuilding Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 The rationalization of traditional shipbuilding methods and the increased use of prefabricated assemblies necessitate the utilization of standardized components wherever possible. It is essential to co-ordinate the dimensions of these components and of the assemblies incorporating them.

0.3 It is intended to introduce the system of dimensional co-ordination which gives module sizes, controlling dimensions and recommendations for co-ordinating spaces, etc, for use in dimensional co-ordination.

0.4 This standard on dimensional co-ordination in shipbuilding is being issued in parts. Other parts are:

- Part I Principles of dimensional co-ordination,
- Part II Glossary of terms, and
- Part III Co-ordinating sizes.

1. SCOPE

1.1 This standard (Part IV) establishes a framework of controlling dimensions for use in the design of ships' deckhouses and accommodation and for assistance in the derivation of co-ordinating sizes of components.

1.1.1 Recommendations are given for the deck to ceiling height, horizontal spacing between bulkheads, controlling zones for bulkhead and lining spaces, and heights for doors and window box heads and sills.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 8712 (Part II)-1978* shall apply.

3. VERTICAL CONTROLLING DIMENSIONS

3.1 In order to make full use of dimensionally co-ordinated components, flat decks are necessary and wherever possible, camber and sheer of the decks should be eliminated.

3.2 The recommendations are based on flat decks as shown in Fig. 1 and where camber and/or sheer is present, consideration should be given to their effect on ceiling heights, in order to give the maximum degree of modular co-ordination.

3.3 The preferred size for deck to ceiling height A is 2 100 mm. Other heights in multiples of 100 mm (preferred) or 50 mm may be selected.

NOTE — The deck to ceiling height is the clear height from top of finished deck to underside of ceiling.

3.4 When selecting the modular deck to ceiling height, allowance shall be made within the tween-deck height (B) for finished floor, structure, services and suspended ceilings.

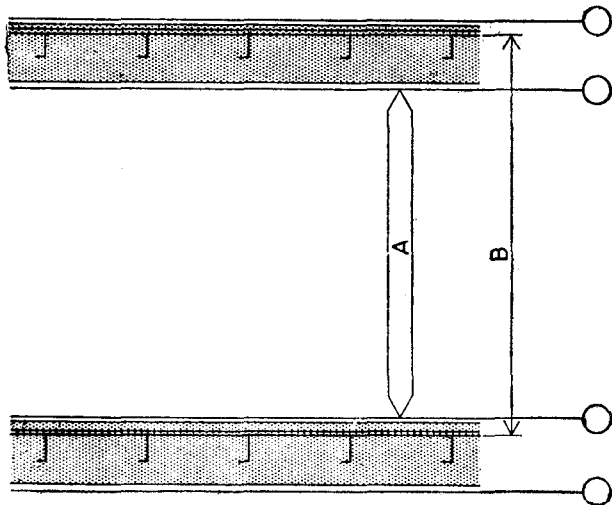


FIG. 1 VERTICAL CONTROLLING DIMENSIONS

*Guidelines for co-ordination of dimensions in shipbuilding: Part II Glossary of terms.

4. HORIZONTAL CONTROLLING DIMENSIONS

4.1 Horizontal controlling dimensions are for the width and spacing of controlling zones for the structural bulkheads and linings, and for the spacing of neutral zones.

4.2 The method of locating controlling lines in relation to and on the boundaries of the zones shall be as shown in Fig. 2.

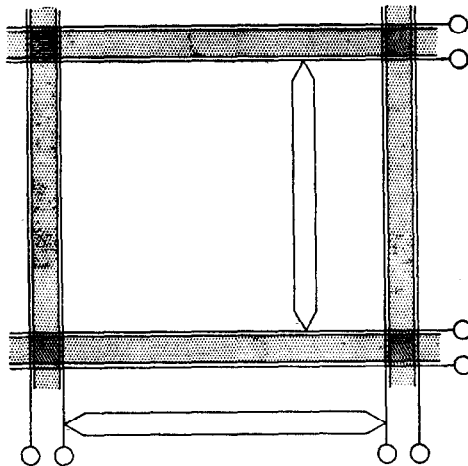


FIG. 2 LOCATION OF CONTROLLING LINES ON THE BOUNDARIES OF ZONES

4.3 In order to make full use of dimensionally co-ordinated components, a box structure is necessary and wherever possible raked or cambered house fronts, shaped house sides and sloping side shell should be avoided or obviated internally.

4.4 The recommendations are based on rectilinear structures and where shaping is present consideration should be given to its effect in order to obtain the maximum degree of modular co-ordination.

4.5 Controlling Dimensions for Widths of Zones — The sizes of controlling zones should be in multiples of 50 mm although some deviation may be necessary where required by structural arrangements. These sizes refer to the dimensions within the boundaries of zones, for example, casing, lining and insulation house-side lining, and insulation and stiffeners.

4.6 The sizes of neutral zones shall be determined from the actual sizes for bulkheads and their supports, etc.

4.7 Controlling Dimensions for Spacing of Zones — Selection of sizes should be made from the table. The sizes refer to the horizontal distances between controlling lines.

First Preference

Multiples of 300 mm
From 300

Second Preference

Multiples of 100 mm
From 300

5. INTERMEDIATE CONTROLLING DIMENSIONS

5.1 Intermediate controlling lines indicate where joints are most likely to occur between components or assemblies. The sizes given are the vertical distance from the controlling line bounding the top of the floor zone.

5.2 Window Box Sill Height — The first preference height of the controlling line for a window/sidelight box sill should be 1 000 mm.

5.3 Window Box Head Height — The first preference height of the controlling line for a window/sidelight box head should be 2 000 mm.

5.4 Door-Set Height — The first preference for the height of the controlling line for a door-set head should be 2 000 mm.

5.5 Alternative Heights — Alternative choices of heights for 5.2, 5.3 and 5.4 should be limited to 100 mm multiples of the standard modules given in IS : 8712 (Part III)-1978*.

*Guidelines for co-ordination of dimensions in shipbuilding: Part III Co-ordinating sizes.